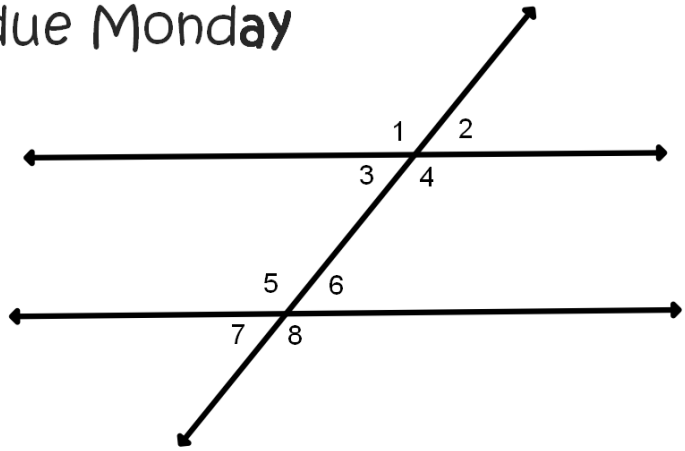
Warm-Up: Thursday, November 11, 2010

POW due Monday



1. Is angle 4 congruent to angle 1? Why?

Yes. VAT.

2. If angle 5 is congruent to angle 1, what can you conclude about angle 1 and angle 8?

They are Congruent

3. What is the relationship between angle 3 and angle 4?

They form a Linear Pair

3-1 Lines and Angles

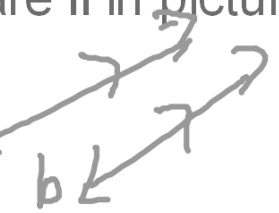
Parallel lines- coplanar lines that do not intersect

the symbol || means "is parallel to"

we use arrows (>) to show lines are || in pictures

Find two parallel lines in the room.

line a || line b



Skew lines- noncoplanar; they are not parallel and do not intersect

Find two skew lines in the room.

line c is skew to line d

Parallel planes- planes that do not intersect

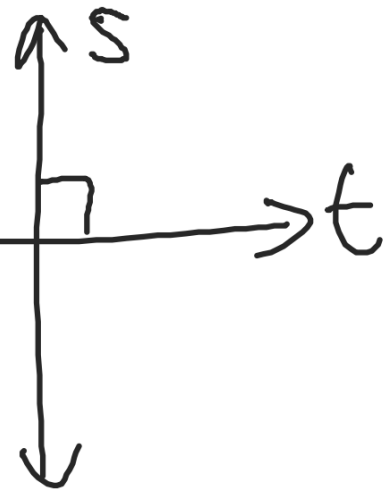
Find two parallel planes in the room.

Plane L || Plane M

perpendicular lines: 2 lines that intersect and form right angles

line s ⊥ line t

⊥ "is perpendicular to"

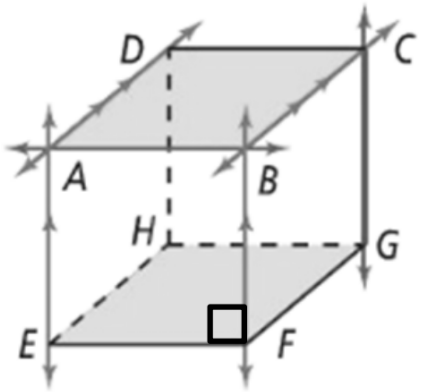


1) $\overleftrightarrow{AE}$ and $\overleftrightarrow{BF}$ are parallel
Another way to write it ||

2) $\overleftrightarrow{AD}$ and $\overleftrightarrow{BC}$ are ||

3) AB and CG are skew

Diagram



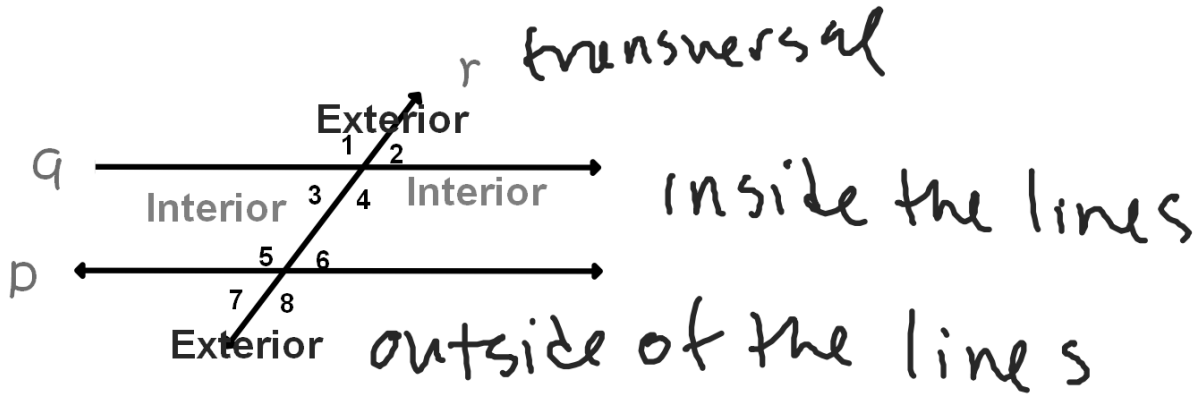
*notice the arrows

4) plane ABCD and plane EFGH are parallel planes

5) $\overleftrightarrow{EF}$ and $\overleftrightarrow{BF}$ are ⊥
Another way to write it perpendicular

Transversal- a line, ray, or segment that intersects two or more coplanar lines, rays, or segments, each at a different point.

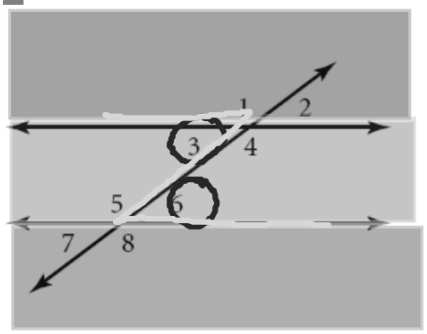
*Think: transversal goes across lines
transatlantic goes across the ocean



Alternate Interior ***Angles:*** **angles formed when 2 parallel lines are cut by a transversal that are on alternate sides of the transversal and in the interior of the parallel lines.**

Rays of angles form a "Z"

Ex. <3 and <6

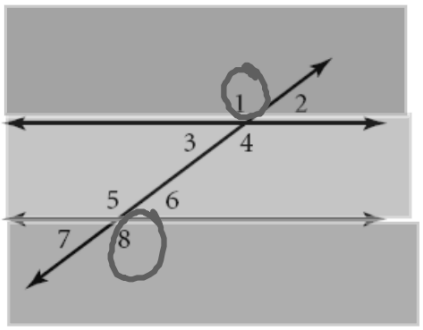


Other alternate interior angles?

∠4 and ∠5

Alternate Exterior ***Angles:*** **angles formed when 2 parallel lines are cut by a transversal that are on alternate sides of the transversal and in the exterior of the parallel lines.**

Ex. <1 and <8

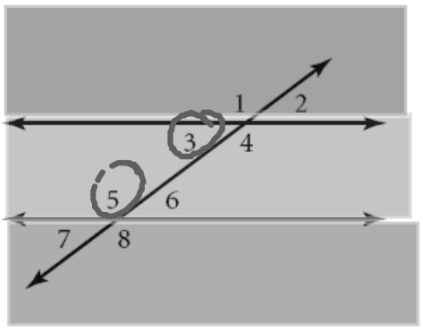


Other alternate exterior angles?

∠2 + ∠7

Same-side Interior Angles: **angles formed when 2 parallel lines are cut by a transversal that are on the same side of the transversal and in the interior of the parallel lines.**

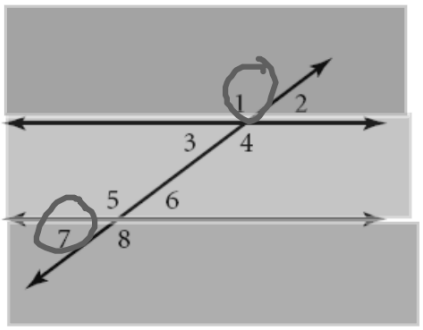
Ex. <3 and <5
∠4 and ∠6



Other same-side interior angles?

Same-side Exterior Angles: **angles formed when 2 parallel lines are cut by a transversal that are on the same side of the transversal and in the exterior of the parallel lines.**

Ex. <1 and <7



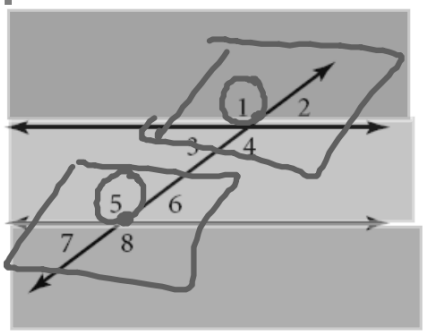
Other same-side exterior angles?

∠2 and ∠8

Corresponding Angles: **angles formed when 2 parallel lines are cut by a transversal that are in the same position on one parallel line as the other.**

Rays of angles form a "F"

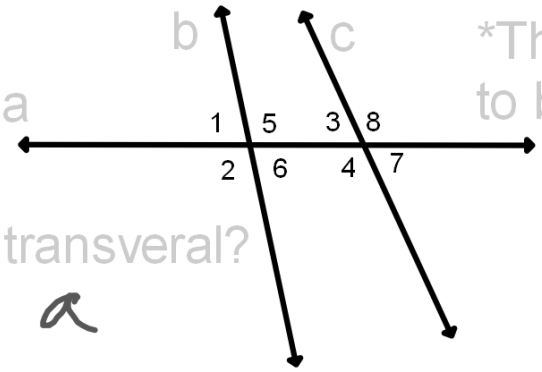
Ex.
<1 and <5
(Both top left)



Other corresponding angles?

∠3 and ∠7 ∠2 and ∠6
∠4 and ∠8

*Think: News Correspondent



*The lines don't have to be parallel.

Which is the transveral?

line a

Tell whether the angles are alternate interior, alternate exterior, same-side interior, corresponding, or neither.

Angles 1 and 8 are: Same side exterior

Angles 7 and 3 are: Neither

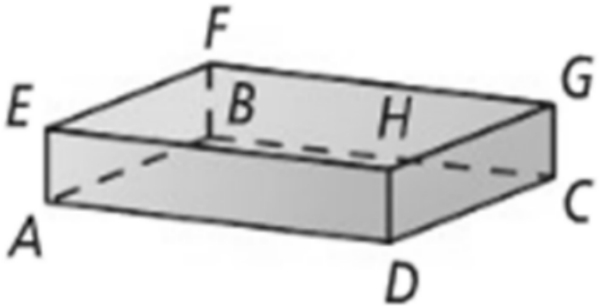
Angles 5 and 4 are: Alternate interior

Angles 3 and 5 are: Same-Side interior

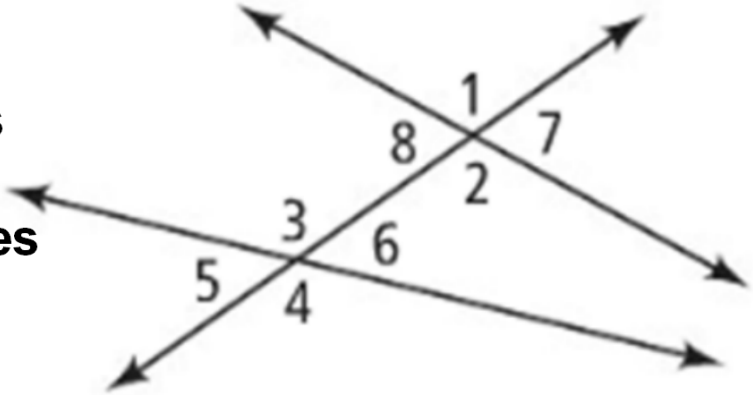
Exit Ticket

Name one pair of:

1. **parallel segments**
2. **skew segments**
3. **parallel planes**
4. **alternate interior angles**
5. **same-side interior angles**
6. **corresponding angles**
7. **alternate exterior angles**



Exercises 1–3



Exercises 4–7

HW=
Workbook
3.1 Practice and Problem Solving